

4130N 318

Work Order ID 136155

136155

Page 1

Item ID: 647.7713

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Strut Thread

Start Date: 9/7/2015 Start Qty: 800

8

Cust Item ID:

Required Date: 9/7/2015 Req'd Qty: 800

8

Customer:

Reference:

Approvals: Process Plan: SH/LL 20-0 1 5 0 8 3 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.7700	A

100

0.00

100

Hardinge CNC LATHE SMALL

Hardinge

Memo

0.05

Hardinge CNC Lathe Small

Machine as per folio FB149

FOLIO REV: AADWG REV: A

Deburr

7 0 JFL 2015-10-29

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

7 0 JFL 2015-10-29

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Work Order ID 136155

Friday, August 28, 2015 1:57:13 PM

136155

Page 2

Item ID: 647.7713

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Strut Thread

Start Date: 9/7/2015

Start Qty: 8.00

8

Cust Item ID:

Required Date: 9/7/2015

Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

DAS
40
9-89

15/10/21

130

Identify as per dwg & Stock Location: CCK114 0.00***130***

Packaging

Memo

0.00

Packaging

***COAT PARTS IN OIL BEFORE PUTTING THEM IN A BAG TO
PREVENT FROM RUSTING***

7 MJS 15-10-30

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.01

Quality Control

NOV 02 2015

SJS 151030

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Friday, August 28, 2015 1:57:16 PM

Work Order ID: 136155

136155

Parent Item: 647.7713

647 7713

Parent Item Name: Strut Thread

Start Date: 9/7/2015

Required Date: 9/7/2015

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A NEW ISSUE 12-11-06 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NR0.375		Purchased	No				f	8.7905		1.684211			

M4130NR0 375

4130 steel RD bar .375"

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT032	8.7905	
123724	3.7705	
<u>m132387</u>	5.02	

1.58 OK 2015-10-29

***NOT PULLED OUT
MATL IN SYSTEM**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04741

SHEET 1 OF 1

DWG NO. 647.7700

REV: NC

PREPARED BY J. SOTO

DATE: 11/13/2014

EFFECT ON DWG
☒ INC. ☐ UNINC.

DWG TITLE: STRUT ASSY

APPROVED BY:

ENGR

MFG

QC

EFF.

NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: CREATED NEW CONFIGURATION. ADDED F/N 5.

20150831
SH 136155

5	A	647.7714	1	STRUT TUBE	△	
4	R	647.7713	1	STRUT THREAD	△	△
3	R	647.7712	1	STRUT TUBE	△	
	C	647.7703	X	STRUT ASSY		
F/N	TC	PART NUMBER	.7703			
		QTY		DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				CHANGE CATEGORY		
				DER REVIEW REQUIRED		

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM

☐ MAJOR ☒ MINOR

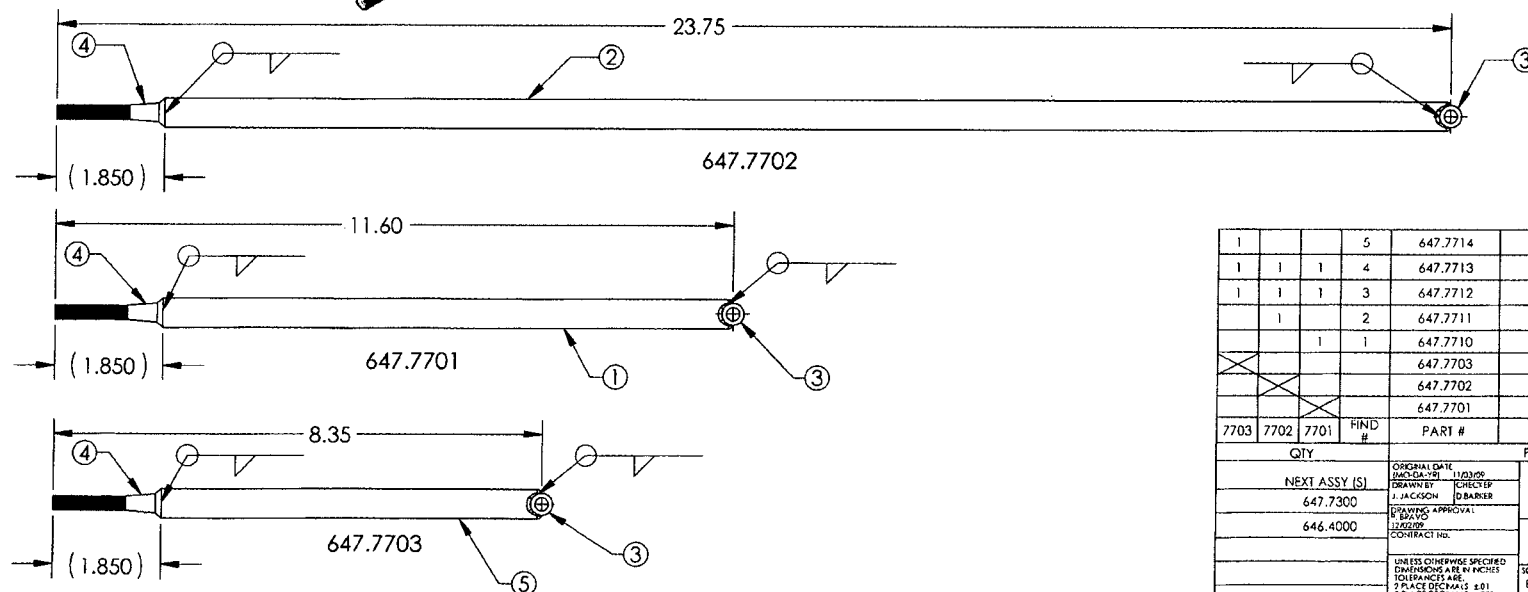
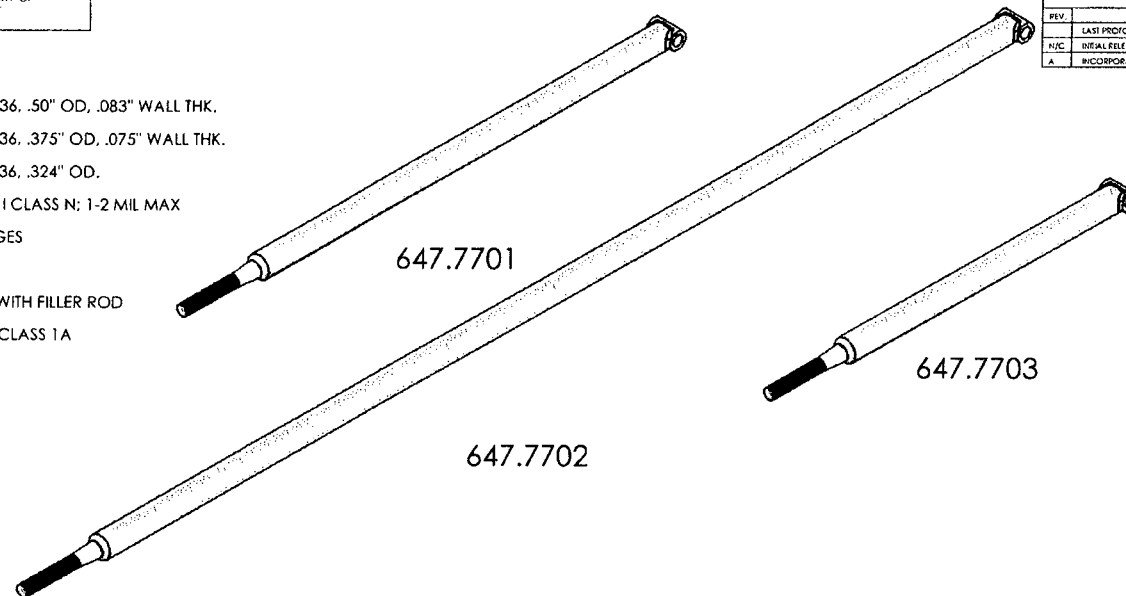
☐ YES ☒ NO

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NOTES:

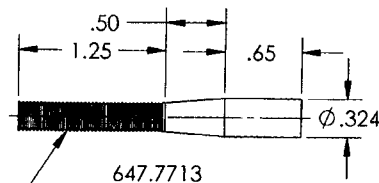
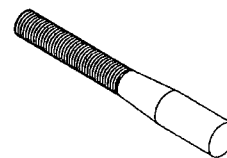
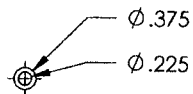
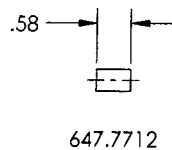
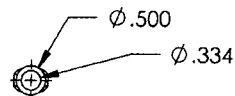
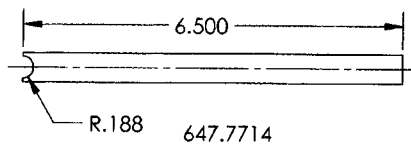
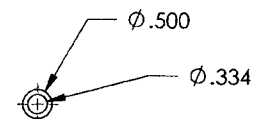
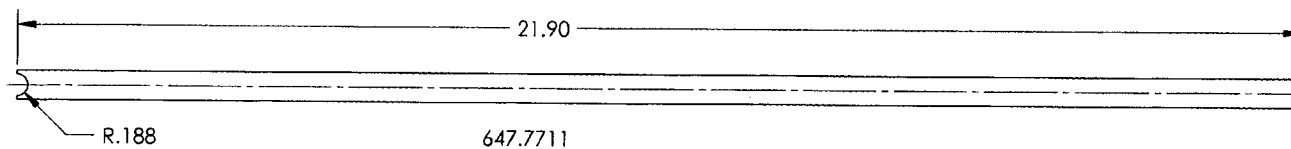
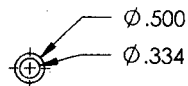
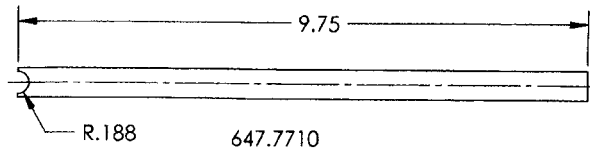
- ⚠ MATERIAL: 4130 STEEL PER AMS-T-6736, .50" OD, .083" WALL THK.
- ⚠ MATERIAL: 4130 STEEL PER AMS-T-6736, .375" OD, .075" WALL THK.
- ⚠ MATERIAL: 4130 STEEL PER AMS-T-6736, .324" OD.
- ⚠ FINISH: PRIME IAW MIL-P-2337J TYPE I CLASS N: 1-2 MIL MAX
- 5. DEBURR AND BREAK ALL SHARP EDGES
- 6. IDENTIFY IAW MPP-120.
- ⚠ WELD IAW MIL-STD-2219, TIG WELD WITH FILLER ROD
- ⚠ FINISH: CAD PLATE IAW MIL-C-5541 CLASS 1A
- ⚠ MASK THREAD PRIOR TO FINISH

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION PER		N/C
2	INITIAL RELEASE	12/03/09	P. BRAVO
3	INCORPORATED ECH 6741	11/13/14	P. BRAVO



			5	647.7714	STRUT TUBE	⚠	
1	1	1	4	647.7713	STRUT THREAD	⚠	⚠
1	1	1	3	647.7712	STRUT TUBE	⚠	
	1		2	647.7711	STRUT TUBE	⚠	
		1	1	647.7710	STRUT TUBE	⚠	
⊗	⊗			647.7703	STRUT ASSY		⚠ ⚠
		⊗		647.7702	STRUT ASSY		⚠ ⚠
				647.7701	STRUT ASSY		⚠ ⚠
7703	7702	7701	FIN#	PART #	DESCRIPTION	MATL	SPEC.
QTY				PARTS LIST			
NEXT ASSY (S)				ORIGINAL DATE 11/03/09 DRAWN BY J. JACKSON CHECKED D. BARKER DRAWING APPROVAL P. BRAVO CONTRACT NO. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ± 5°			
647.7300							
646.4000							
				APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300 STRUT ASSY			
				SHEET	CAGE CODE	DWG. NO.	REV.
				B	07M26	647.7700	A
				SCALE: NONE SHEET 1 OF 2			

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ORIGINAL DATE
1/10/00
DRAWN BY
J. JACKSON
DRAWING APPROVAL
P. BRAVO
CONTRACT NO.

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

STRUT ASSY

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS $\pm .01$
3 PLACE DECIMALS $\pm .005$
ANGLES $\pm .5^\circ$

SHEET	CAGE CODE	DWG. NO.	REV.
B	07M26	647.7700	A
SCALE: NONE			SHEET 2 OF 2

